

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

Claim 1. (Currently amended) A method for altering fiber development or properties of a fiber-producing plant comprising the step of providing cells of said plants a plant with a chimeric gene comprising the following operably linked DNA fragments:

a plant expressible promoter;

[[a]] the coding region which when transcribed yields an RNA said RNA being capable of reducing the expression of an endogenous from a plant sucrose synthase gene, preferably an endogenous sucrose synthase gene expressed in fiber cells, preferably fiber initial cells; or capable of being translated into an active sucrose synthase protein; and,

a transcription termination and polyadenylation signal which functions in said plant cells.

Claim 2. (Currently amended) The method according to claim 1, wherein said RNA is capable of being coding region from a plant sucrose synthase gene is translated into an active plant sucrose synthase protein.

Claim 3. (Currently amended) The method according to claim 2, wherein said coding region from a plant sucrose synthase gene comprises a nucleotide sequence selected from

- a) — a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID No 2; NO: 2.
- b) — a nucleotide sequence comprising the nucleotide sequence of SEQ ID No 1;
- c) — a nucleotide sequence having at least 70% sequence identity with the nucleotide sequence a) or b);
- d) — a nucleotide sequence hybridizing under stringent conditions with the nucleotide sequence a) or b);  
or a part thereof encoding an active sucrose synthase.

Claim 4. (Withdrawn; Currently amended) The method according to claim 1, wherein said RNA is capable of reducing coding region from a plant sucrose synthase gene reduces the expression of an endogenous sucrose synthase gene.

Claim 5. (Withdrawn; Currently amended) The method according to claim 4, wherein said coding region comprises a nucleotide sequence selected from the group consisting of

- a nucleotide sequence comprising at least 19 or 25 contiguous nucleotides having at least 70 % sequence identity to a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID No NO: 2 or the complement thereof; and
- a nucleotide sequence comprising at least 25 contiguous nucleotides having at least 70 % sequence identity to a nucleotide sequence encoding a polypeptide comprising the nucleotide sequence of SEQ ID No NO: 1 or the complement thereof.

Claim 6. (Withdrawn; Currently amended) The method according to claim 5, wherein said coding region comprises the nucleotide sequence of SEQ ID NºNO: 1 from the nucleotide at position 2208 to the nucleotide at position 2598 or the complement thereof.

Claim 7. (Withdrawn) The method according to claim 5, wherein said coding region comprises both sense and antisense nucleotide sequences capable of forming a double stranded RNA molecule.

Claim 8. (Currently amended) The method according to any one of claims 1-to-7, 1, 2, or 3, wherein said promoter is a subterranean clover stunt virus promoter.

Claim 9. (Currently amended) The method according to any one of claims 1-to-7,1, 2, or 3, wherein said fiber-producing plant is a cotton plant.

Claim 10. (Original) The method according to claim 8, wherein said fiber-producing plant is a cotton plant.

Claim 11. (Canceled).

Claim 12. (Currently amended) A method for improving fiber yield in a fiber-producing plant, comprising providing cells of said plant with a chimeric gene comprising the following operably linked DNA fragments  
a plant expressible promoter;

a-DNA the coding region capable of being translated into an active from a sucrose synthase protein gene; and

a transcription termination and polyadenylation signal which functions in said plant cells.

Claim 13. (Currently amended) A method for improving fiber quality in a fiber-producing plant, comprising providing cells of said plant with a chimeric gene comprising the following operably linked DNA fragments

a plant expressible promoter;

a-DNA the coding region capable of being translated into an active from a sucrose synthase protein gene; and

a transcription termination and polyadenylation signal which functions in said plant cells.

Claim 14. (Currently amended) A method for increasing seed size in a fiber-producing plant, comprising providing cells of said plant with a chimeric gene comprising the following operably linked DNA fragments:

a seed-specific promoter;

a-DNA the coding region capable of being translated into an active from a sucrose synthase protein gene; and

a transcription termination and polyadenylation signal which functions in said plant cells.

Claim 15. (Currently amended) A fiber-producing plant comprising in its genome a chimeric DNA comprising the following operably linked DNA fragments:

a plant expressible promoter;

~~[[a]] the coding region which when transcribed yields an RNA said RNA being capable of reducing the expression of an endogenous from a sucrose synthase gene, preferably an endogenous sucrose synthase gene expressed in fiber cells, preferably fiber initial cells; or capable of being translated into an active sucrose synthase protein; and,~~

a transcription termination and polyadenylation signal which functions in said plant cells.

Claim 16. (Currently amended) A fiber-producing plant according to claim 15, wherein said RNA is capable of increasing the expression of an endogenous sucrose synthase gene, preferably an endogenous sucrose synthase gene expressed in fiber cells, preferably fiber initial cells and said fiber cells have an increased sucrose synthase activity compared to fiber cells of plant cells which do not comprise said chimeric DNA coding region from a plant sucrose synthase gene is translated into an active plant sucrose synthase protein.

Claim 17. (Currently amended) The fiber-producing plant according to claim 16, wherein said coding region 15, wherein said sucrose synthase gene comprises a nucleotide sequence selected from

- a) — a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID No 2; NO: 2.
- b) — a nucleotide sequence comprising the nucleotide sequence of SEQ ID No 1;

- e) — a nucleotide sequence having at least 70% sequence identity with the nucleotide sequence a) or b);
- d) — a nucleotide sequence hybridizing under stringent conditions with the nucleotide sequence a) or b);  
or a part thereof encoding an active sucrose synthase.

Claim 18. (Withdrawn) A fiber-producing plant according to claim 15, wherein said RNA is capable of reducing an endogenous sucrose synthase gene and said fiber cells have a reduced sucrose synthase activity compared to fiber cells of plant cells which do not comprise said chimeric DNA.

Claim 19. (Withdrawn; Currently amended) The fiber-producing plant according to claim 18, wherein said coding region comprises a nucleotide sequence selected from the group consisting of

a nucleotide sequence comprising at least 19 or 25 contiguous nucleotides having at least 70 % sequence identity to a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID No: 2 or the complement thereof; and

a nucleotide sequence comprising at least 19 or 25 contiguous nucleotides having at least 70 % sequence identity to a nucleotide sequence encoding a polypeptide comprising the nucleotide sequence of SEQ ID No: 1 or the complement thereof.

Claim 20. (Withdrawn; Currently amended) The fiber-producing plant according to claim 18, wherein said coding region comprises the nucleotide sequence of SEQ ID No: 1

NO: 1 from the nucleotide at position 2208 to the nucleotide at position 2598 or the complement thereof.

Claim 21. (Currently amended) The fiber-producing plant according to any one of claims ~~15 to 20~~, 15, 16, or 17, wherein said plant is a cotton plant.

Claim 22. (Currently amended) Seeds of a plant according to any one of claims ~~15 to 20~~, 15, 16, or 17.

Claim 23. (Original) Seeds of a plant according to claim 21.

Claim 24. (Currently amended) Fibers with altered development or properties, isolated from plants according to any one of claims ~~15 to 20~~, 15, 16, or 17.

Claim 25. (Original) Fibers with altered development or properties, isolated from plants according to claim 21.

Claim 26. (Currently amended) Plants obtained through the methods of any one of claims ~~1 to 7~~, 1, 2, or 3.

Claim 27. (Original) Plants obtained through the methods of claim 8.

Claim 28. (Original) Plants obtained through the methods of claim 9.

Claim 29. (Original) Plants obtained through the methods claim 10.

Claim 30. (Currently amended) Plants obtained through the methods of any one of  
claims 11 to 12, 13, or 14.